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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,999	05/04/2001	Guy B. Irving	067856.0212	8976

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EXAMINER

MASINICK, MICHAEL D

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 03/25/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Applicati n No.

09/848,999

Applicant(s)

IRVING ET AL

Examiner

Michael D Masinick

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-13,20-23,34 and 35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-13,20-23,34 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

This case was filed with informal drawing. Formal drawings will be required upon allowance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 8 recites the limitation "the CPU". There is insufficient antecedent basis for this limitation in the claim. Assuming this is a reference to claim 7 "central processing unit", claim 7 needs to have (CPU) or the acronym CPU needs to be changed to "central processing unit" in claim 8.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-12, 22-23, 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over by U.S. Patent No. 6,470,289 to Peters et al in view of U.S. Patent No. 6,037,732 to Alfano et al.
5. Referring to claims 7, 22, and 24, Peters et al shows controlling a plurality of server chassis cooling fans, comprising transmitting a first request to a server processing card controller

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to read a first operating temperature measured at a first temperature sensor (Figure 1, claim 1, Col 3, lines 53-65); receiving the first operating temperature at a central processing unit (Col 3, lines 53-65); comparing the first operating temperature with a first predetermined maximum operating temperature (Fig 7, block 310); and transmitting a second request to a server chassis cooling fan to increase the speed of the server chassis cooling fans if the first operating temperature is greater than or equal to the first predetermined maximum operating temperature (Figure 7, blocks 318 and 322).

6. Peters does not specifically show that the second request can be submitted to a plurality of server chassis cooling fans.

7. It is well known in the art to use multiple fans inside one computer casing to provide maximum cooling capabilities. Alfano et al shows the control of multiple fans from a single fan control card as used in Peters (Col 8, lines 61-63).

8. It would have been obvious to one of ordinary skill in the art at the time of invention to use the multiple fan control card of Alfano in the cooling system of Peters because the use of multiple fans would provide more cooling ability.

9. Referring to claim 8, Peters shows receiving second and third operating temperatures at the CPU, the second and third operating temperatures being associated with the second and third temperature sensors, respectively (Claim 1); comparing the second and third operating temperatures with the second and third predetermined maximum operating temperatures, respectively (Figures 4-6, Col 14, lines 23-32 – “If the current CPU temperatures are within their associated temperature ranges...”); and transmitting the second request to increase the speed of

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the server chassis cooling fan(s) if the second or third operating temperatures are greater than or equal to the second or third predetermined maximum operating temperatures, respectively (Shown in relation to claims 7, 20 and 22 above). Examiner notes that while all examples in Peters use two sensors, claim 1 of Peters clearly shows the ability to have “at least two” sensors.

10. Referring to claim 9, Peters shows where at least two of the first, second and third predetermined maximum operating temperatures are equal. Examiner notes that this is a user decision, and while not mentioned specifically in Peters, these ranges are individually set and could obviously be set to equal values.

11. Referring to claim 10, Peters shows wherein the first request is transmitted over a PCI bus (Col 7, lines 27-30).

12. Referring to claim 11, 23, and 35, Peters shows receiving, at the controller, the operating temperature from a sensor chip (Col 10, lines 11-13).

13. Referring to claim 12, Peters shows wherein the operating temperature is received at the controller over an I2C bus (Col 10, lines 61-63).

14. Referring to claim 20, Examiner notes that all features of this claim have been singularly met above with the exception of the ability of the fans to be controlled by any server processing card. By networking two of the systems of claims 7, 22, and 34 by means such as a null modem cable or other simple networking method, you can arrive at the invention of claim 20.

15. It would have been obvious to one of ordinary skill in the art at the time of invention to network two of the computers as shown above to allow either computer motherboard or

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processing card to control any of the cooling fans because if multiple fans are used to cool computers in differing parts of a room or rack, all computers should have control over each fan.

16. Referring to claim 21, see claims rejections of claims 7, 22, and 34 above. Examiner takes the ability to control multiple fans to satisfy the claim requirement that there be more fans than fan control cards.

17. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over by U.S. Patent No. 6,470,289 to Peters et al in view of U.S. Patent No. 6,037,732 to Alfano et al as shown above and further in view of U.S. Patent No. 6,065,081 to Stancil et al.

18. Peters in view of Alfano as shown above does not show where the second request comprises a GPIO signal.

19. The use of General Purpose Input/Output signals is well known in the art for their ability to be quickly analyzed and used. Stancil et al shows the use of GPIO signals over a PCI bus for the purpose of passing password data over the bus.

20. It would have been obvious to one of ordinary skill in the art to use the GPIO signals of Stancil to move the PCI bus signals of Peters in view of Alfano because they are quickly analyzed and would be well suited for closed loop control.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and to the state of the art at the time of invention.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D Masinick whose telephone number is (703) 305-7738.

The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (703) 308-0538. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7239 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

mdm
March 20, 2003

A handwritten signature in black ink, appearing to read "Leo P. Picard", written in a cursive style.

**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**